

What is claimed is:

1. A plasma processing method comprising the step of plasma processing an object to be processed using a plasma processing apparatus for allowing plasma generating means to
5 cause plasma igniting, wherein

an amount of charges deposited on the object to be processed at least at the time of plasma extinction is reduced.

2. A plasma processing method comprising the step of plasma processing an object to be processed placed on a lower
10 electrode using a plasma processing apparatus which has an upper electrode and the lower electrode, a spacing therebetween being adjustable, and which causes plasma igniting by applying high-frequency power to at least one of the upper and lower electrodes, wherein

15 the spacing is made larger at least at the time of plasma extinction than during plasma processing.

3. The plasma processing method according to claim 2, wherein

first high-frequency power is applied to the upper
20 electrode, and second high-frequency power having a lower frequency than the first high-frequency power is applied to the lower electrode.

4. The plasma processing method according to claim 2, wherein

25 the lower electrode is moved away from the upper

electrode to increase the spacing.

5. The plasma processing method according to claim 3,
wherein

the first high-frequency power is turned off after the
5 second high-frequency power is turned off.

6. The plasma processing method according to claim 2,
wherein

etching is performed as the plasma processing.

7. A plasma processing apparatus comprising:

10 a lower electrode for placing an object to be processed
thereon;

an upper electrode disposed above the lower electrode so
as to oppose it;

an adjusting mechanism for adjusting a spacing between
15 the upper and lower electrodes by raising or lowering the
lower electrode; and

a high-frequency power supply for applying high-frequency
power to at least one of the upper and lower electrodes, the
high-frequency power being applied to either one of the
20 electrodes to cause plasma igniting, wherein

the adjusting mechanism has a drive mechanism for making
the spacing larger at least at the time of plasma extinction
than during plasma processing of the object to be processed
placed on the lower electrode.

25 8. The plasma processing apparatus according to claim 7,

further comprising:

a first high-frequency power supply for applying first high-frequency power to the upper electrode; and

a second high-frequency power supply for applying second
5 high-frequency power having a lower frequency than the first high-frequency power to the lower electrode.

9. The plasma processing apparatus according to claim 7,
wherein

the adjusting mechanism has a drive mechanism for moving
10 the lower electrode away from the upper electrode.

10. The plasma processing apparatus according to claim 8,
wherein

the first high-frequency power is turned off after the second high-frequency power is turned off.

15 11. The plasma processing apparatus according to claim 7,
wherein etching is performed as the plasma processing.